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# UNITED STATES GRADES FOR RYE

RECOMMENDED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE

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## UNITED STATES GRADES FOR RYE.

### Recommended by the United States Department of Agriculture.[1]

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The following grades for the grading and marketing of rye are recommended by the Bureau of Agricultural Economics of the United States Department of Agriculture.

The grades here recommended are the result of extensive investigations relating to the various phases of the rye industry, including production, conducted by the Department of Agriculture, and of suggestions received from grain dealers and grain inspectors who have a knowledge of this grain.

These grades are not fixed and established under the United States grain standards act at this time, but it is hoped that they will be adopted by all agencies engaged in the handling of rye. It is believed that with the voluntary and general support of all interested parties these grades will provide a basis for uniform grading, and will assist materially in the marketing of rye.

### UNITED STATES GRADES FOR RYE.

For the purposes of the United States grades for rye:

SECTION 1. *Rye.*—Rye shall be any grain which consists of 50 per cent or more of rye, and when free from dockage contains not more than 10 per cent of cereal grain of a kind or kinds other than rye.

SECTION 2. *Basis of determinations.*—Each determination of dockage, moisture, temperature, odor, onions, garlic, and live weevils or other insects injurious to stored grain shall be upon the basis of the grain including dockage. All other determinations shall be upon the basis of the grain when free from dockage.

SECTION 3. *Percentages.*—Percentages, except in the case of moisture, shall be percentages ascertained by weight.

SECTION 4. *Percentage of moisture.*—Percentage of moisture in rye shall be that ascertained by the moisture tester and the method of use thereof described in Circular 72, and supplement thereto, issued by the United States Department of Agriculture, Bureau of Plant Industry, or as determined by any device and method giving equivalent results.

SECTION 5. *Test weight per bushel.*—Test weight per bushel shall be the weight per Winchester bushel as determined by the testing apparatus and the method of use thereof described in Bulletin No. 472, dated October 30, 1916, issued by the United States Department of Agriculture, or as determined by any device and method giving equivalent results.

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[1] These grades embody the recommendations of the United States Department of Agriculture, but are not fixed and established at this time under the United States grain standards act because of a lack of funds for their proper enforcement as compulsory standards.

SECTION 6. *Damaged kernels.*—Damaged kernels shall be all grains and pieces of grains of rye which are heat damaged, sprouted, frosted, badly ground damaged, badly weather damaged, or otherwise distinctly damaged.

SECTION 7. *Heat-damaged kernels.*—Heat-damaged kernels shall be kernels and pieces of kernels of rye and other grains which have been distinctly discolored by external heat or as a result of heating caused by fermentation.

SECTION 8. *Dockage.*—Dockage includes sand, dirt, weed seeds, weed stems, chaff, straw, grain other than rye, and any other foreign material, which can be removed readily from the rye by the use of appropriate sieves, cleaning devices, or other practical means suited to separate the foreign material present; also undeveloped, shriveled, and small pieces of rye kernels which are removed in properly separating the foreign material, and which can not be recovered by properly rescreening or recleaning.

The quantity of dockage shall be calculated in terms of percentage based on the total weight of the grain including the dockage. The percentage of dockage so calculated, when equal to 1 per cent or more, shall be stated in terms of whole per cent, and when less than 1 per cent shall not be stated. A fraction of a per cent shall be disregarded. The percentage of dockage, so determined and stated, shall be added to the grade designation.

SECTION 9. *Foreign material other than dockage.*—Foreign material other than dockage shall include all matter other than rye, which is not separated from the rye in the proper determination of dockage.

SECTION 10. *Garlicky rye.*—Garlicky rye shall be all rye which has an unmistakable odor of garlic or wild onions or which contains garlic or wild onion bulblets in a quantity equal to one or more bulblets in 1,000 grams of rye.

Garlicky rye shall be graded and designated according to the grade requirements of the grades applicable to such rye if it were not garlicky, and there shall be added to, and made a part of, the grade designation the word "garlicky."

SECTION 11. *Weevily rye.*—Weevily rye shall be all rye which is infested with live weevils or other insects injurious to stored grain.

Weevily rye shall be graded and designated according to the grade requirements of the grades applicable to such rye if it were not weevily, and there shall be added to, and made a part of, the grade designation the word "weevily."

SECTION 12. *Ergoty rye.*—Ergoty rye shall be all rye which, after the removal of dockage, contains ergot in excess of 0.3 per cent.

Ergoty rye shall be graded and designated according to the grade requirements of the grades applicable to such rye if it were not ergoty, and there shall be added to, and made a part of, the grade designation the word "ergoty."

SECTION 13. *Smutty rye.*—Smutty rye shall be any rye which has an unmistakable odor of smut, or which contains spores, balls, or portions of balls, of smut, in excess of a quantity equal to two balls of average size in 50 grams of rye.

Smutty rye shall be graded and designated according to the grade requirements of the grades applicable to such rye if it were not

smutty, and there shall be added to, and made a part of, the grade designation the word "smutty."

SECTION 14. *Grades.*—All rye shall be graded and designated No. 1, No. 2, No. 3, No. 4, or Sample Grade, as the case may be, according to the respective requirement thereof as specified in these grades.

Number 1—

(*a*) shall be cool and of natural odor;
(*b*) shall have a test weight per bushel of at least 56 pounds;
(*c*) may contain not more than 13½ per cent of moisture;
(*d*) may contain not more than 2 per cent of damaged kernels, which 2 per cent may include not more than 0.1 per cent of heat-damaged rye and other grains; and
(*e*) may contain not more than 3 per cent of foreign material other than dockage, which 3 per cent may include not more than 1 per cent of foreign matter other than wheat.

Number 2—

(*a*) shall be cool and of natural odor;
(*b*) shall have a test weight per bushel of at least 54 pounds;
(*c*) may contain not more than 14½ per cent of moisture;
(*d*) may contain not more than 4 per cent of damaged kernels; which 4 per cent may include not more than 0.2 per cent of heat-damaged rye and other grains; and
(*e*) may contain not more than 6 per cent of foreign material other than dockage, which 6 per cent may include not more than 3 per cent of matter other than wheat.

Number 3—

(*a*) shall be cool and of natural odor;
(*b*) shall have a test weight per bushel of at least 52 pounds;
(*c*) may contain not more than 15½ per cent of moisture.
(*d*) may contain not more than 7 per cent of damaged kernels, which 7 per cent may include not more than 0.5 per cent of heat-damaged rye and other grains; and
(*e*) may contain not more than 10 per cent of foreign material other than dockage, which 10 per cent may include not more than 5 per cent of matter other than wheat.

Number 4—

(*a*) shall be cool and may be musty or sour;
(*b*) shall have a test weight per bushel of at least 49 pounds;
(*c*) may contain not more than 16½ per cent of moisture;
(*d*) may contain not more than 15 per cent of damaged kernels, which 15 per cent may include not more than 3 per cent of heat-damaged rye and other grains; and
(*e*) may contain not more than 10 per cent of foreign matter other than dockage, which 10 per cent may include not more than 7 per cent of matter other than wheat.

Sample Grade—

Sample Grade rye shall be all rye which does not come within any of the grades from Nos. 1 to 4, inclusive, or which has any commercially objectionable foreign odor except of smut, garlic, or wild onions, or is heating, hot, or otherwise of distinctly low quality, or contains small, inseparable stones or cinders.

## APPENDIX.

*Tabulation of grade requirements for rye, garlicky, weevily, ergotry, and smutty rye.*

[Section 14, tabulated and abridged.]

| Grade. | Condition. | Minimum test weight per bushel. | Maximum limits of— | | | | |
|---|---|---|---|---|---|---|---|
| | | | Moisture. | Damaged kernels. | | Foreign material other than dockage. | |
| | | | | Total. | Heat damaged (rye and other grains). | Total. | Foreign matter other than wheat. |
| | | *Pounds.* | *Per cent.* | *Per cent.* | *Per cent.* | *Per cent.* | *Per cent.* |
| 1 | Shall be cool and of natural odor | 56 | 13.5 | 2 | 0.1 | 3 | 1 |
| 2 | Shall be cool and of natural odor | 54 | 14.5 | 4 | .2 | 6 | 3 |
| 3 | Shall be cool and of natural odor | 52 | 15.5 | 7 | .5 | 10 | 5 |
| 4 | Shall be cool and may be musty or sour | 49 | 16.5 | 15 | 3.0 | 10 | 7 |

SAMPLE GRADE.—Sample Grade rye shall be all rye which does not come within any of the grades from Nos. 1 to 4, inclusive, or which has any commercially objectionable foreign odor except of smut, garlic, or wild onions, or is heating, hot, or otherwise of distinctly low quality, or contains small, inseparable stones or cinders.